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Annual Report of the Colorado River Board of California, 1979

Colorado River Board of California

ANNUAL REPORT

Colorado River Board of California

Year Ending December 31, 1979

STATE OF CALIFORNIA—THE RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

COLORADO RIVER BOARD OF CALIFORNIA
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May 2, 1980

Honorable Edmund G. Brown, Jr.
Governor of California
State Capitol
Sacramento, California 95814

Dear Governor Brown:

We are pleased to present to you and the Legislature the Colorado River Board's Annual Report for Calendar Year 1979.

Water supplies in the Colorado River Basin were at an above-average level for the year and these above-average conditions extended into 1980. The United States Water and Power Resources Service commenced making anticipatory flood control releases from Hoover Dam in May 1979. These anticipatory releases were made to reduce the magnitude and extent of potentially damaging releases in future years. The excess flows, coupled with extremely high flows on Lower Basin tributaries below Hoover Dam, caused some flooding problems for Mexico in the Colorado River Delta area. The Board worked with United States and other officials in seeking to alleviate the problems resulting from the high Colorado River flows.

The first triennial revision of the water quality standards for the Colorado River System, on which the Board played the major role in 1978, were adopted by five of the seven Colorado River Basin states during 1979 and were approved by the Environmental Protection Agency. The other two states anticipate adoption of the standards in 1980. The Board continued its close working relationships with federal agencies and others involved in the Colorado River Basin Salinity Control Program and spent considerable efforts to secure reauthorizing legislation in Congress that would update the 1974 Colorado River Basin Salinity Control Act.

The lawsuit, Environmental Defense Fund (EDF) vs. the Environmental Protection Agency, Department of the Interior, and the seven Colorado River Basin states, was settled in favor of the defendants in October 1979. In December 1979, EDF appealed the judgment.

Litigation was initiated by the United States in late 1978 to permit the diversion of additional Colorado River water by five lower Colorado River Indian reservations for irrigation use in Arizona, California, and Nevada. If the Court awards the reservations the rights claimed on their behalf by the United States, it is estimated that nearly 60,000 acre-feet per year of consumptive use rights would be taken from existing users in California. A Special Master was appointed by the Court in 1979 and the litigation was actively pursued on preliminary issues during the year. The trial is scheduled to be held in 1980.

A new issue, that of renewal of the Boulder Canyon Project (Hoover Dam) hydroelectric power contracts after the current 50-year contracts expire in May 1987, commenced in 1979. The Board is coordinating the efforts of the California agencies having existing electric power contracts in analyzing and commenting on the federal government's proposed marketing plans to the end that their existing contracts will be renewed with satisfactory terms and conditions.

These and other activities in the Colorado River Basin are described in the report which follows and in a separate supplemental appendix.

Sincerely yours,

Patricia C. Nagle

Patricia C. Nagle, Chairman
and Colorado River Commissioner

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Edmund G. Brown Jr.
Governor
State of California

Huey D. Johnson
Secretary for Resources
The Resources Agency

Myron B. Holburt
Chief Engineer
Colorado River Board
of California

Colorado River Board of California

City of Los Angeles, Department of Water and Power

The City of Los Angeles Department of Water and Power supplies water and electric service to over 3.4 million residents of the third largest city in the United States. The Department's assets in 1979 were $3.4 billion, making it the nation's largest municipal water and power utility system.

The City normally imports approximately 80 percent of its water supply from the Owens Valley through the First and Second Los Angeles Aqueducts. The remaining supplies are derived from local groundwater basins (15 percent) and The Metropolitan Water District of Southern California (5 percent).

The City is the founder and one of the original member cities of the Metropolitan Water District and receives Colorado River water through the Colorado River Aqueduct. Water use in Los Angeles averages 494 million gallons a day or 140 gallons per capita per day.

Palo Verde Irrigation District

The Palo Verde Irrigation District is located along the Colorado River in eastern Riverside County. The principal City is Blythe. It includes 120,500 acres, of which 92,000 in the valley and 5,000 on the lower Palo Verde Mesa are under cultivation.

The District obtains its irrigation water from the Colorado River and has one of the oldest water diversion rights on the entire river system. Use of Colorado River water for the irrigation of lands in the Blythe area dates back to 1877. The expenditures on Colorado River water facilities by the District and its predecessors amount to approximately $25 million.

Principal agricultural products of the Palo Verde Irrigation District are alfalfa, wheat, cotton, lettuce, cantaloupes, watermelons, onions, and citrus. In 1979, these crops had a value of $97.4 million. Livestock values from cattle and sheep feeding operations during the year amounted to about $22 million.

San Diego County Water Authority

The San Diego County Water Authority encompasses approximately 898,600 acres and includes most of the developed areas in San Diego County. It has a population of about 1,758,700 and an assessed valuation of $9.1 billion.

The Authority is a member of The Metropolitan Water District of Southern California, having annexed to the District in 1946. At that time, the Authority merged its right to 112,000 acre-feet of Colorado River water annually with the District's original right of 1,100,000 acre-feet.

Colorado River water is delivered to the Authority through two branch aqueducts which carry the water south from the main Colorado River Aqueduct. Approximately 90 percent of all water distributed by the Authority's 23 member agencies is delivered through the San Diego Aqueducts.

The Metropolitan Water District of Southern California

The Metropolitan Water District of Southern California built and operates the 242-mile-long Colorado River Aqueduct which since 1941 has delivered water to the coastal plain. Additionally, Metropolitan is the largest of 31 contractors for Northern California water from the State Water Project.

Since northern water became available to the District in 1972, it has gradually decreased pumping on the Colorado River Aqueduct as it has increased the amounts of State Project water imported. Blending these two waters has enabled Metropolitan to supply a good quality municipal and industrial water. In 1976, MWD had adjusted its take of water from the two sources to some 790,000 acre-feet from the Colorado and 600,000 from the State Project. The impact of the great drought, however, abruptly turned things around. In order to make more water available to stricken northern areas, in 1977 Metropolitan imported about 1,290,000 acre-feet from the Colorado and took only 190,000 from the State.

Metropolitan's service area covers 5,100 square miles, with a population of nearly 12 million and an assessed valuation of about $64 billion.

To deliver northern water to its 27 member agencies, the District is expanding its facilities at a cost of nearly $1.5 billion and has an investment of more than $500 million in its Colorado River Aqueduct and its distribution system.

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Imperial Irrigation District

Imperial Irrigation District in the Southeastern corner of the state, is located in Imperial and Riverside Counties, and is bordered by Mexico on the south and by the Colorado River on the east. The gross acreage within the District boundaries—in Imperial County—is 1,062,290 of which 509,239 acres now receive water, making the IID one of the largest irrigation projects in the western hemisphere.

The 80-mile-long All-American Canal delivers Colorado River water to the District's 1,627 mile distribution system, and is the sole source of water for all agricultural, industrial, and domestic purposes. The Canal, placed in service in 1942, replaced the Alamo Canal, which was in service from 1901 and traveled much of its distance through Mexico. In addition to its Canal and distribution system, the District also maintains a 1,401 mile drainage network.

Imperial Valley, known as the "Winter Garden of America—Where the Sun Spends the Winter", annually produces crops valued at approximately $800 million, with the livestock industry contributing a substantial part of this amount. Imperial Valley cattle-feeding operations are the largest in the world.

The Colorado River, via the All-American Canal, has made possible the production of high-quality winter and early spring vegetables and fruits in large quantities. Other multi-million dollar crops include sugar beets, alfalfa, wheat, cotton, lettuce, carrots and cantaloupes.

The All-American Canal also provides a second service, i.e., production of electric power—from hydroplants located along its channel—to the extent of 250,000,000 kwh per annum supplementing a 1,400,000,000 kwh power requirement to serve 140,000 consumers situated in Imperial and Riverside Counties.

Coachella Valley Water District

The Coachella Valley Water District is located west and north of the Salton Sea in California. More than 135,000 of its 620,451 acres could be irrigated from the 123-mile Coachella Branch of the All-American Canal. There are presently 67,500 acres under irrigation rotation.

The Coachella Branch of the All-American Canal brings vital Colorado River water to the fertile valley. The investment of the District in works dependent upon the water of the Colorado River system totals approximately $34 million, including the underground distribution system and terminal reservoir at Lake Cahuilla.

Principal agricultural products of the Coachella Valley are dates, grapefruit, grapes, vegetables, alfalfa, cotton and grain which in 1979 had a value of $147.29 million. In 1979, the per acre crop value exceeded $2,600.

Water for the District's 24,000 urban customers is supplied by deep wells. CVWD has a contract for Northern California water to be used for ground water recharge.

Through an exchange agreement with The Metropoliltan Water District of Southern California, CVWD is using water from the Colorado River Aqueduct for groundwater recharge until facilities are constructed to extend the California Aqueduct to Coachella Valley. MWD, in turn, takes CVWD's State Water Project entitlement.

In addition to irrigation and urban water service, Coachella Valley Water District maintains regional stormwater control facilities, wastewater reclamation facilities, and irrigation drainage facilities.

Membership

Patricia C. Nagle, Chairman (Department of Water and Power, City of Los Angeles)

Raymond R. Rummonds, Vice Chairman (Coachella Valley Water District)

John M. Cranston, Member (San Diego County Water Authority)

Howard H. Hawkins, Member (The Metropolitan Water District of Southern California)

Virgil L. Jones, Member (Palo Verde Irrigation District)

Paul A. Mitchell, Member (Imperial Irrigation District)

Helen K. Burke, Public Member

Milton N. Nathanson, Public Member

Sanford K. Smith, Public Member

E. Charles Fullerton, (Director, Department of Fish and Game)

Ronald B. Robie, (Director, Department of Water Resources)

Executive Staff

Myron B. Holburt, Chief Engineer

Dennis B. Underwood, Executive Secretary

Introduction

The Colorado River Board of California is the State agency created by the Legislature in 1937 for the purpose of protecting the rights and interests of the State, its agencies, and its citizens in the water resources of the Colorado River System. The duties of the Board are set forth in Sections 12527 through 12533 of the California Water Code. The activities of the 12-member staff are directed by the Chief Engineer, Myron B. Holburt. The California Attorney General is legal counsel to the Board, and Deputy Attorneys General Douglas B. Noble and Emil Stipanovich have been assigned to provide continuing legal services to the Board.

The Board consists of a total of 11 members. Six members are appointed by the Governor from the agencies with Colorado River water and power rights—City of Los Angeles Department of Water and Power, Coachella Valley Water District, Imperial Irrigation District, The Metropolitan Water District of Southern California, Palo Verde Irrigation District, and San Diego County Water Authority. Three additional members are appointed by the Governor from the public, and the Directors of the Departments of Water Resources and Fish and Game, or their designees, are ex-officio members of the Board. The Governor appoints a Chairman from among the members of the Board other than the latter two members or their designees. Patricia C. Nagle continued as Chairman of the Board during 1979. Raymond R. Rummonds was elected to serve as Vice Chairman of the Board.

Colorado River Operations

Operations During 1979

The estimated virgin flow of the Colorado River at Lee Ferry during the 1978–79 water year (October 1 through September 30) was 17,793,000 acre-feet. This was 128 percent of the long-time average flow of 13,855,000 acre-feet for the 58-year period from 1922 through 1979. The effects of this above-average flow are described in the next section.

During the water year, storage in Upper Basin reservoirs increased by 4,893,000 acre-feet, and storage in Lower Basin reservoirs increased by 1,308,000 acre-feet. As of September 30, 1979, the active storage in the major Upper Basin reservoirs was 26,705,000 acre-feet and the active storage in the Lower Basin reservoirs was 24,240,000 acre-feet. The actual flow of the river below Glen Canyon at Lee Ferry for the water year was 8,262,000 acre-feet.

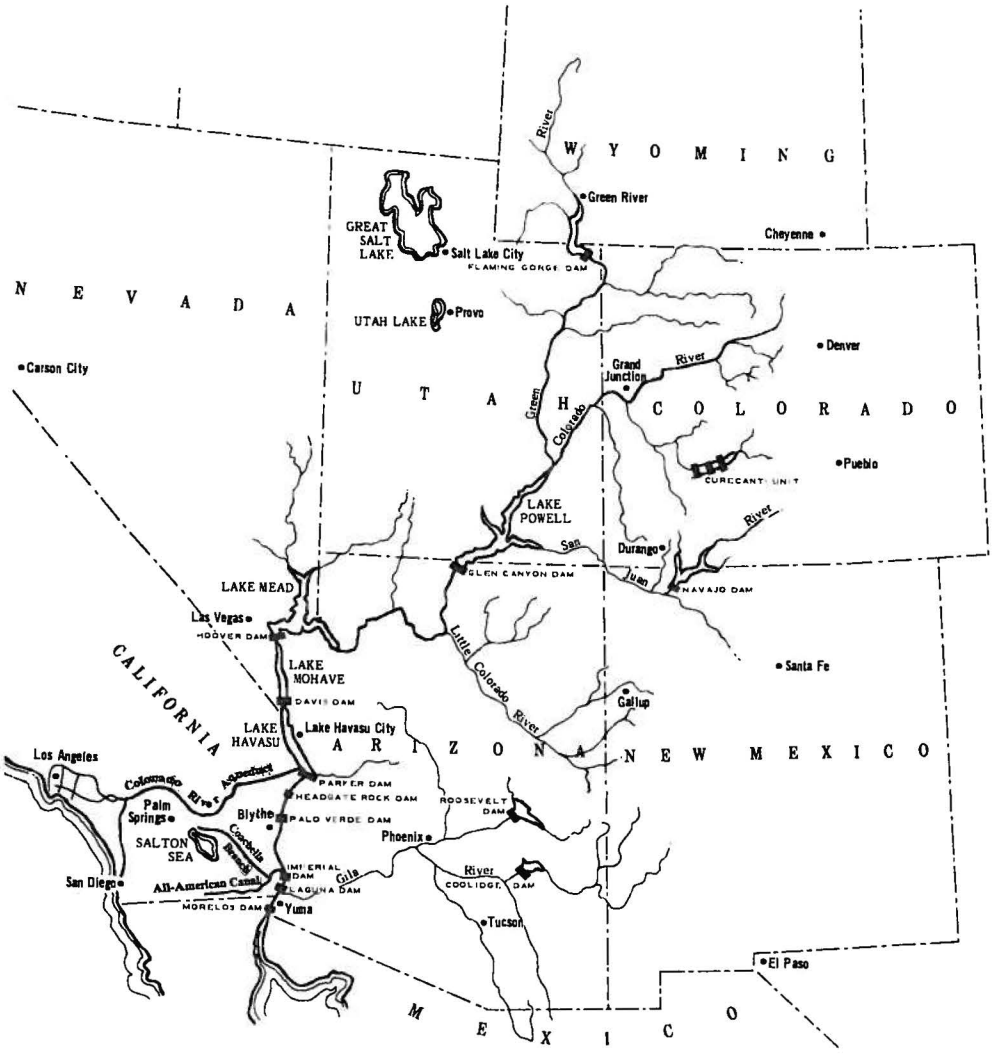
The U.S. Water and Power Resources Service, the new name, after November 6, 1979, for the Bureau of Reclamation, estimated the 1978–79 water year Upper Basin depletions by the Upper Basin States (Colorado, New Mexico, Utah, and Wyoming) at 3,658,000 acre-feet, 248,000 acre-feet less than the previous year.

Diversions less measured returns from the mainstream for the major water users of the Lower Basin States (Arizona, California, and Nevada) were 6,069,000 acre-feet for calendar year 1979, 265,000 acre-feet more than in 1978. Data from major California users show diversions less returns for calendar year 1979 at 4,891,000 acre-feet, 295,000 acre-feet more than 1978.

Deliveries of Colorado River water to Mexico in accordance with the 1944 United States-Mexico Water Treaty totaled 3,345,000 acre-feet during calendar year 1979 or 1,845,000 acre-feet in excess of the Treaty's guaranteed annual quantity. Of this amount, 251 acre-feet was conveyed on an interim basis to the City of Tijuana through facilities of the Metropolitan Water District and other agencies in accordance with Minute No. 240 of the International Boundary and Water Commission, about 88,000 acre-feet was delivered across the southerly international boundary near San Luis, and about 2,044,000 acre-feet was diverted into the Alamo Canal.

Of the 1,845,000 acre-feet of delivery in excess of the Treaty's guaranteed annual quantity, about 178,000 acre-feet was covered under provisions of the Commission's Minute No. 242, the 1973 salinity agreement with Mexico, and 200,000 acre-feet was chargeable to additional scheduled flow under Article 10(b) of the Treaty which provides that when there exists a surplus, the United States will provide 1,700,000 acre-feet annually to Mexico. The remaining 1,467,000 acre-feet of excess deliveries were due to floodwaters from tributaries entering the Colorado River below Hoover Dam and from releases from Lake Mead in excess of downstream requirements. Minute No. 240 is described in the Board's 1972 Annual Report and Minute No. 242 is described in the Board's 1973 Annual Report.

The Colorado River Basin Salinity Control Act of 1974 recognized " . . . replacement of the reject stream from the desalting plant and of any Wellton-Mohawk drainage water bypassed to the Santa Clara Slough . . . as a national obligation . . ." The Santa Clara Slough is adjacent to the Gulf of California and is the terminus of the canal constructed to convey Wellton-Mohawk drainage water and the reject stream from the desalting plant through Mexico. Since passage of the Act, and through December 31, 1979, an accumulative total of 1,099,000 acre-feet has been discharged from the Wellton-Mohawk Drain below Morelos Dam, Mexico's diversion structure on the river, with the drainage water flowing through the lined canal to the Santa Clara Slough since its completion on June 23, 1977. While these bypassed quantities have been recognized by the Department of the Interior as a potential debit against the water to be salvaged by lining the Coachella Canal, the surplus waters delivered to Mexico during 1979 exceed the accumulated volume of bypassed flows and thus the debit through 1979 has been canceled.



High Colorado River Flows

In addition to the high Colorado River flow at Lee Ferry during the 1978–79 water year noted in the previous section, heavy precipitation in the Lower Colorado River Basin caused unusually high streamflows on tributaries below Hoover Dam and excess deliveries to Mexico.

During the early part of 1979, releases from Hoover Dam were at a minimum rate because the flood control releases from Alamo Dam on the Bill Williams River and Painted Rock Dam on the Gila River provided more than enough water to supply Mexico with its scheduled deliveries. However, this release pattern resulted in substantial deficiencies in hydroelectric power generation at Hoover, Davis, and Parker powerplants. Late season runoff forecasts indicated that the April through July Upper Basin runoff would be substantially above normal, and the Water and Power Resources Service made studies that showed high probabilities of potentially damaging releases being required from Hoover Dam in the next few years. After consultations with the states and concerned agencies as to the best course of action, the Service announced its decision to make anticipatory flood releases of 700,000 acre-feet from Lake Mead between May 1 and September 30, 1979. Actual excess releases amounted to 689,000 acre-feet. The 1979 schedule of deliveries to Mexico was increased by 200,000 acre-feet to a total of 1,700,000 acre-feet, as allowed by the 1944 Treaty wih Mexico.

These excess flows caused some flooding problems for Mexico in the Colorado River Delta, particularly in the area where the Rio Hardy joins the Colorado. The problems arose because (1) Mexican farmers had been farming on the river side of the levees; (2) recreational housing had been located in the floodplain; (3) for a long period there had been little or no maintenance of the river channel; and (4) a sediment barrier had been created at the mouth of the normally dry Colorado River which impeded the outflow of Colorado River water to the Gulf of California. Mexico attempted to make maximum beneficial use of the excess flows, diverting over 2,000,000 acre-feet into its irrigation system that serves lands throughout the Colorado River Delta on both sides of the river and correspondingly decreased pumping from the ground-water basin.

Preliminary studies have shown the possibility of flooding problems along the river in the United States, in the Imperial Valley and Salton Sea areas, and in Mexico, associated with forecasted high Colorado River flows over the next several years. Concerned over these potential problems, the Chief Engineer wrote letters to the Corps of Engineers, Water and Power Resources Service, and International Boundary and Water Commission and made an inspection trip of the Colorado River Delta area. The Chief Engineer recommended that the Service move forward with a management plan for the Parker II Division of the river, that the Corps study measures to reduce potential damages from flood control releases in the entire lower Colorado River area, and that the Corps, in cooperation with the Service and the Commission, expand its current study of the Hoover Dam Flood Control Regulations to include determination of measures necessary to provide safe discharge of flood control releases to the Gulf of California without causing flood damages in Mexico and in the Imperial Valley. Investigations along the lines suggested are under way.

During an inspection trip, the Chief Engineer noted the work that Mexico is undertaking to protect its lands in the delta area. Mexico was raising the heights of some levees, building new levees, and eliminating constrictions in existing channel areas. The Chief Engineer also ascertained that the existing levees and elevated canal lines running from the river into the Mexicali Valley would protect Mexicali Valley and Imperial Valley lands against flood flows exceeding 70,000 cubic feet per second, which flows are greatly in excess of the revised Hoover Dam Flood Control Regulations design flows, which are in process of formal adoption.

The problem of flooding in Mexico was a topic discussed at meetings of the Commission of the Californias, which consists of representatives of the State of California and the Mexican State of Baja California. The Chief Engineer answered inquiries from California representatives relative to the excess flows.

Meetings were called by the Water and Power Resources Service in August in Salt Lake City to brief state representatives on alternative water release plans for the 1979–80 water year. The recommended plan proposed release of an additional 700,000 acre-feet above that required to meet downstream water requirements, for the purpose of river regulation, anticipated flood control operations to minimize potential downstream flood damages prior to 1985, and to meet firm power commitments of the Boulder Canyon Project power contractors. By letter of August 24, 1979, the Chief Engineer concurred in the recommended plan, stating that this concurrence was based on analyses that show a very high probability that reservoirs would fill prior to commencement of Central Arizona Project water deliveries.

By letter of September 7, 1979, the Service notified Governor Brown that it had adopted the recommended plan.

Preliminary estimates of the 1979–80 water year runoff of the Colorado River, based upon Upper Basin snowpack conditions existing in early 1980, point to another year of above-average runoff. The Board's staff, the Department of Water Resources, and the Metropolitan Water District had discussions on possible ways that California water agencies could make use of any excess Colorado River flows.

Program for Banking Water in Lake Mead

The study of banking, or storing, water in Lake Mead, initiated in 1978, was continued. The concept involves The Metropolitan Water District of Southern California increasing its deliveries from the State Water Project, taking less than its annual Colorado River apportionment, and having a like amount credited to its account in Lake Mead. In years of low water supply from the State Water Project, in addition to its annual apportionment, Metropolitan would divert water credited to its account in Lake Mead.

The Chief Engineer met with officials of Metropolitan, California State Department of Water Resources, and representatives of Arizona and Nevada, and outlined a general proposal, criteria for operational studies, and a scope of study. The proposal, criteria, and scope were also reviewed with the Water and Power Resources Service. It was agreed that the Board would be lead agency for the study and that the Service would perfect a simplied annual simulation computer model of the Colorado River system that would be used in conducting the operational studies.

As a part of this program, the Department of Water Resources prepared a memorandum report which analyzed the ability of the California Aqueduct to deliver water that could be available for the banking concept under hydrologic sequences equal to those occurring from 1906 to 1978 with assumed future water demand, facility development, and system operation. After a review of the results of this report, the Department agreed to conduct additional studies to determine the availability of State Project water under different assumptions of system operations and completion of the proposed Peripheral Canal Unit of the State Water Project.

The Service completed initial development of the computer simulation model at year's end and the Board's staff worked with the staffs of the Metropolitan Water District and the Service on adapting the model to the District's computer.

Water Quality

Colorado River Salinity Standards

At the end of 1978, the seven-state Colorado River Basin Salinity Control Forum adopted the 1978 revision to the Colorado River salinity standards and recommended adoption by the individual states. The 1978 revision continued the 1972 flow-weighted average annual salinities of 723 mg/l below Hoover Dam, 747 mg/l below Parker Dam, and 879 mg/l at Imperial Dam as the numeric criteria for salinity for the Colorado River. It also continued the plan of implementation set forth in the original salinity standards that encompasses the federal salinity control program and state and local actions to control salinity, and added a requirement that the Forum's permanent Work Group conduct an analysis of the results of the salinity control program.

The States of Nevada and Arizona adopted the revised standards in April, New Mexico in May, Utah in June, and California in September. The Environmental Protection Agency has approved the state-adopted revisions for the five states. The States of Colorado and Wyoming expect adoption in early 1980.

California's adoption was delayed since the California Environmental Quality Act (CEQA) directs that an Environmental Impact Report (EIR) be prepared for any project which could have a significant adverse environmental impact. A "project" is defined to include the approval activities of public agencies. CEQA allows for preparation of a Functional

Equivalent which is a brief environmental statement in lieu of an EIR. Accordingly, with assistance from the Board's staff, the State Water Resources Control Board prepared a Functional Equivalent on the revised standards. Following a review and comment period, the Functional Equivalent to the EIR and the standards revision were approved by the State Water Resources Control Board.

In December 1979, the Colorado River Basin Salinity Control Forum released its "Third Annual Progress Report—Water Quality Standards for Salinity—Colorado River System." The annual report presents summary information for the period October 18, 1978–October 18, 1979, on results achieved by the salinity control program and other actions in the Basin having an influence on salinity control. The report concluded that the federal salinity control program has fallen considerably behind schedule. However, since the rate of water development has been considerably slower than anticipated, and water conditions have been favorable, salinity concentrations at Imperial Dam were about 70 milligrams per liter below the numeric criteria during the year. The report further concluded that it would be highly unlikely that the criteria will be exceeded during the ensuing twelve-month period.

Colorado River Basin Salinity Control Program

The Water and Power Resources Service continued its efforts on the Colorado River salinity control projects and the Colorado River Water Quality Improvement Program in accordance with the Colorado River Basin Salinity Control Act of 1974, P.L. 93-320. The Department of Agriculture continued its active role in salinity control through its on-farm salinity control program which is under way in the Grand Valley, Colorado, and the Uintah Basin, Utah. Salinity control effects are being studied by the Bureau of Land Management in an effort to reduce the salt contribution from the nation's public lands.

Contract negotiations continued between the Department of the Interior and the Grand Valley Water Users Association for the operation and maintenance of the Grand Valley Salinity Control Unit by the Association. A question that prolonged the negotiations concerned the applicability of reclamation law to salinity control projects, which would have brought the project under that law's acreage limitations. Another difficult question was whether to impose penalty charges for excess uses of water. When executed, the contract will set a precedent for future operations and maintenance contracts on those salinity control units that involve improvement of irrigation systems and lands.

The Department of Agriculture's on-farm salinity control program, initiated in Grand Valley, Colorado, in 1979, has been widely accepted by farmers in the Valley. The federal-local cost-share program, which divides the cost with 75 percent as the federal share and 25 percent as the local share, is designed to reduce the salt load through improved on-farm irrigation systems and farm water management. In the initial year, 470 farmers requested that they be allowed to participate, and salinity control practices were installed on 163 farms. This 10-year program will eventually remove an estimated 130,000 tons of salt annually through on-farm practices on 48,000 acres. The Department of Agriculture's program and the Water and Power Resources Service's off-farm water system improvement program are, together, projected to reduce salt contributions from Grand Valley by an estimated 410,000 tons annually.

The Department of Agriculture completed a report, "Salinity Report, Uintah Basin, Utah," as part of the basinwide salinity control program. The report recommends an on-farm program for salinity control in the

Unlined portion of Government Highline Canal, Grand Valley Salinity Control Project, Colorado.

Uintah Basin that would cover 120,000 acres and could reduce salt contribution by about 77,000 tons annually.

In mid-1979, the Water and Power Resources Service awarded a contract for a feasibility study of the Meeker Dome Salinity Control Unit to a consulting engineering firm. This was the first consulting contract for a planning study on a salinity control unit issued by the Service, and was entered into because the Service did not have sufficient staff to do the necessary planning studies in a timely manner. In order to expedite the salinity control program, the Service contemplates that it will enter into similar contracts in the future.

Amendments to Title II, Colorado River Basin Salinity Control Act

In May 1979, as authorized by Section 208(a) of P.L. 93-320, the Department of the Interior advised the appropriate committees of Congress that certain changes in the authorized salinity control units were warranted. Section 208(a) provides that, if the committees do not disapprove the changes within 60 days, funds may be expended therefor. The changes included the placing of laterals in pipes in the Grand Valley Unit and authorization for fish and wildlife mitigation measures. The Act had listed the lining of off-farm laterals as an authorized control measure but was silent on using pipes. However, studies have shown that replacing the unlined laterals with pipe rather than lining the laterals is a cost-effective method for increased salt removal and that it also offers a greater opportunity for salt reduction by permitting more extensive on-farm practices. The Act had been silent on fish and wildlife mitigation.

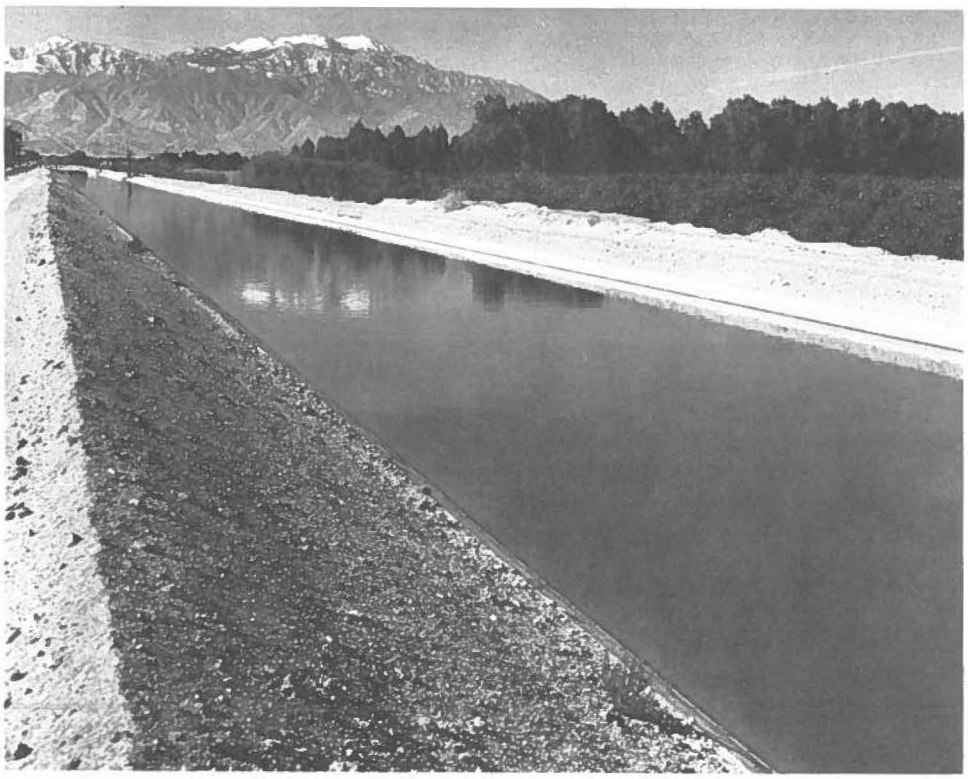
By letter dated June 1, 1979, Senators Jackson and Hatfield of the Senate Committee on Energy and Natural Resources disapproved the expenditure of funds for the above purposes and suggested that the proposed measures be presented for fuller consideration by the Congress. In accordance with that suggestion, H.R. 5199 was introduced by Colorado Congressmen Johnson and Kogovsek. The bill would authorize measures to mitigate losses of fish and wildlife habitat and would authorize pipes to be used to replace canals and laterals for the Grand Valley Unit. Since the bill would also limit construction activities in the Grand Valley Unit to only a portion of the unit, pending completion of that portion and subsequent analyses, the bill was not considered to be completely satisfactory by the Colorado River Salinity Control Forum. Hearings on the bill were not held during 1979.

Basin Water Quality Control Plans

Section 208 of the Clean Water Act of 1977 requires procedures for continuing planning for improving the nation's water quality. These "208 planning studies" were being carried on throughout the Basin. The Environmental Protection Agency, which is funding the 208 studies, has directed the local planning agencies doing the work to consider salinity as part of their overall plans. The salinity portions of the plans are being reviewed and commented upon by the Forum Work Group with a goal of obtaining compatible plans involving salinity control throughout the Basin that will also be consistent with the Forum's policies. Within the Basin, four new 208 plans received state certification and four plans previously certified by the states received conditional approval by the Environmental Protection Agency. Those portions of the 208 plans dealing with salinity became a part of the Salinity Control Forum's plan of implementation for salinity control after certification by the states and approval by the Environmental Protection Agency.

Little progress was made on the 208 planning study for the Colorado River region in California during the year. New funding arrangements for this

Coachella Branch of All-American Canal



study were under consideration at the close of the year.

Yuma Desalting Plant

The Water and Power Resources Service continued its studies of potential sources of replacement water for the reject stream from the proposed Yuma Desalting Plant and of methods to reduce the plant's size. The plant, the principal feature authorized by Title I of P.L. 93-320, would desalt the drainage flow from the Wellton-Mohawk Irrigation and Drainage District.

Board staff members attended meetings and reviewed reports of the federally appointed Wellton-Mohawk Technical Field Committee which studied several alternatives for reducing the volume of the drainage flows from the Wellton-Mohawk District which would enable the desalting plant to be reduced in size. These alternatives included intensification of the Soil Conservation Service's ongoing irrigation improvement program; reuse of Wellton-Mohawk drainage water to irrigate new lands in Arizona, California, or Mexico; reuse of Wellton-Mohawk drainage water within the district by recycling part of the return flow; and pumping the Wellton-Mohawk drainage water back to the Colorado River above Imperial Dam.

Toward the end of 1979, the Wellton-Mohawk Technical Field Committee concluded that the only viable alternative was an increase in the Soil Conservation Service's ongoing irrigation efficiency improvement program.

The Colorado River Board adopted a resolution in January 1979, which expressed its support for legislation reauthorizing the features of Title I of P.L. 93-320 that would cover additional features needed to accomplish the Title I objectives and the funds for both the additional features and for inflationary increases in costs. Subsequently, the bill H.R. 2609 was introduced which increased the appropriation ceiling for Title I from $155.5 million to $333.4 million, authorized additional fish and wildlife facilities, authorized use of power from the Navajo Generating Station, and approved changes in engineering plans for the desalting plant and Coachella Canal construction. The Chief Engineer, one of California's two members on the seven-state Committee of Fourteen, supported a statement by the Committee on H.R. 2609, presented to Congress on March 20, which supported the items mentioned above. Information on the various aspects of the Yuma Desalting Plant was also given to California Congressmen to use in considering H.R. 2609 and other legislation reauthorizing features of Title I of P.L. 93-320.

While work on the Yuma Desalting Plant was held up due to the reauthorizing legislation being considered by Congress, work continued on the replacement of a 49-mile unlined section of the Coachella Canal. A second contract was awarded for construction of the concrete-lined replacement canal which, with the first contract, covers the entire 49 miles, and the contractor has made good progress during the year.

Regional Developments

As described in this section, the Board's staff continued to review plans for water and energy development projects in the Colorado River Basin to determine their effect on California's Colorado River water rights and interests, and, if necessary, to attempt to obtain changes in the projects. Substantial increases in prices for imported oil during the year, plus the unsettled political situation in Iran, a major oil-exporting nation, have renewed national interest in the development of the Colorado River Basin's coal and oil shale resources. The President has proposed energy development goals that include the development and use of these basin resources. Various governmental regulations have hindered energy developments in the last few years, and the President has called for creation of an Energy Mobilization Board to expedite these developments.

General Accounting Office Reports on Colorado River Basin Water and Energy Problems

The United States General Accounting Office report entitled, "Colorado River Basin Water Problems: How to Reduce Their Impact", was released during the year. The report analyzes several of the major current and future Colorado River Basin problems and issues, but reveals a certain lack of understanding of some of these problems. The Board's 1978 Annual Report described the draft of this report and the comments which the Chief Engineer transmitted to the General Accounting Office.

The staff reviewed and analyzed another General Accounting Office report during the year entitled, "Electrical Energy Development in the Pacific Southwest". The report proposed that the Western Area Power Administration be made a showcase to demonstrate the federal government's commitment to conservation and use of renewable resources. The report analyzed Western's operations in California, Arizona, and Nevada as being indicative of its entire operations.

In order to force conservation of energy through increased prices, the report recommends that Congress give Western a broad charter that would direct Western to structure its rates to

encourage conservation, and provide it with authority to gradually increase rates leading to parity with average utility rates in the area by year 2000.

Upper Basin Developments

The Board's staff reviewed and commented on the Draft Environmental Statement on the *Animas-LaPlata Project,* Colorado—New Mexico. This is one of the five projects authorized by the Colorado River Basin Project Act of 1968. The statement concludes that the project will result in an 18 milligrams per liter increase in salinity at Imperial Dam. The staff commented that the salt load from irrigation and from the reservoirs will probably be higher than indicated in the statement and requested that this matter be reexamined.

Upon request of the Water and Power Resources Service, the staff made a review of a draft report on the *Meeker Dome Salinity Control Unit* in northwestern Colorado. The study considered the source and quantity of salt discharged from Meeker Dome and a number of control alternatives.

The staff reviewed the draft, "U.S. Department of Agriculture Salinity Report, *Uintah Basin Unit,* Utah," and submitted comments to the Utah State Conservationist. The report was prepared as part of the basinwide salinity control program to study the effects of on-farm improvements on irrigation efficiencies and river salinity.

The Commissioner of the Water and Power Resources Service approved the Definite Plan Report for the *Paradox Valley Salinity Control Unit* in western Colorado and the unit's Environmental Impact Statement was filed with the Council on Environmental Quality, thus placing the unit officially under construction.

The Water and Power Resources Service awarded two contracts totaling $24.9 million for construction of pumping plants, laterals and collector drains on the *Navajo Indian Irrigation Project* in New Mexico.

A $14.9-million contract was awarded for Stage I construction of Ridgway Dam on the *Dallas Creek Project,* Colorado.

An $11.8-million contract was awarded for the construction of the Vat Diversion Dam and West Fork Pipeline, features of the *Bonneville Unit* of the Central Utah Project. Two additional contracts, totaling $4.0 million, were awarded for construction of recreation roads and facilities for the Strawberry Reservoir Recreation Area.

Lower Basin Developments

Excavation of the 6.8-mile-long Buckskin Mountain Tunnel, a major feature of the *Central Arizona Project* (CAP) was completed. The Water and Power Resources Service awarded two other CAP contracts—a $24.5-million contract for construction of the *Hassayampa Pumping Plant* and a $10.9-million contract for equipment to be installed at the *Hassayampa, Little Harquahala and Bouse Hills pumping plants.* Also awarded was an $18.3-million contract for construction of a 13½-mile reach of the CAP's *Granite Reef Aqueduct.*

Three contracts, totaling $15.8 million, were awarded for construction of pumping plants and switchyards and for furnishing and installing pumping units, related equipment and a computer control system on the *Second Stage of the Southern Nevada Water Project.*

A $6.6-million contract was awarded for relocating and lining 6½ miles of main canal on the *Colorado River Indian Reservation* surrounding the town of Parker, Arizona.

Weather Modification Activities

The Water and Power Resources Service continued its planning on the Colorado River Weather Modification Demonstration Project. The Board supported write-in appropriations for this project in 1977 and 1978. The Administration now recognizes the value of this program and included it as a line item in the 1980 fiscal year budget in the amount of $215,000 plus carryover funds from previous fiscal years.

The Board's staff reviewed and commented on the draft report "Conceptual Plan to Develop Water Augmentation by Weather Modification in the Colorado River," prepared by the Service. In its comments the staff recommended an expansion of the report's discussion of the Congressional directives to the Secretary of the Interior regarding his responsibilities to augment the Colorado River and Congressional recognition that weather modification should be studied as a possible augmentation source. In addition, the staff commented that reference should be made in the final report to the 1968 Colorado River Basin Project Act wherein Congress declared that the satisfaction of the Mexican Water Treaty obligation from the Colorado River constitutes a national obligation which should be the first obligation of any water augmentation project.

The draft report contains a schedule showing that the program does not plan for firm conclusions to be drawn as to the overall feasibility of weather modification as an augmentation source until the year 1998. This date is much too late in considering the many water-supply-related decisions that will have to be made in the next several years; accordingly, the staff recommended that the program be revised as necessary and rescheduled so that results from the program would be available by the mid-1980's, if possible.

Vegetation Management for Increased Water Yield

The Board received a copy of the final report entitled, "Vegetation Management for Water Yield Improvement in the Colorado River Basin," prepared by the U.S. Forest

Service for the Pacific Southwest Inter-Agency Committee. The report refers to a hypothetical maximum projected increase in the annual flow of the Colorado River of four million acre-feet in the Upper Basin and two million acre-feet in the Lower Basin but states that these are unrealistic goals. The report does not state what would be realistically attainable levels of water yield increase but does analyze a program that would develop about 500,000 acre-feet in the Upper Basin and 250,000 acre-feet in the Lower Basin.

In 1978, the Board's staff, after reviewing the draft report, recommended that the vegetation management studies be coordinated with the weather modification studies of the Water and Power Resources Service to obtain full benefits from the effects of simultaneous cloudseeding and vegetation management activities, which multiplies the impacts of each. These multiplying effects, which are called "synergistic effects", were analyzed in the final report, wherein it was concluded that the combined programs would produce more runoff than the sum of each individual program.

Lower Colorado River Management Program

The Federal-State Lower Colorado River Management Program Work Group met three times during 1979 to continue coordination of problems of river control, channelization, and environmental preservation and enhancement. The Coordinating Committee did not meet during the year. The functions of the Committee and the Work Group have been described in the Colorado River Board's previous Annual Reports.

During 1979, pursuant to a proposal

Winter operation of three silver iodide generators to increase precipitation in the Basin.

of the California Department of Fish and Game, the Beal Slough backwater on the California side of the Colorado River between Needles and Topock was dredged by the Water and Power Resources Service in order to deepen the backwater at low river stages. Improvement of habitat for fish and wildlife and development of recreational facilities within the slough was initiated.

Also during 1979 the Work Group initiated a study of the need for clearing the vegetation-covered flood plain of the Colorado River near Yuma, Arizona. An evaluation was made of the value of the existing habitat for both aquatic and terrestrial species and of alternative methods of strip clearing in order to increase channel conveyance capacity while at the same time leaving some undisturbed habitat.

A subcommittee of the Work Group adopted a plan of study for channel stabilization and environmental enhancement in the Parker II Division which calls for preparation of Environmental Quality and National Economic Development plans under the Water Resources Council's new Principles and Standards. While these plans were being slowly developed, the excess flows that were released during the year accelerated the existing rates of stream scour and bank cutting, with resultant deleterious impacts downstream from the sediment being picked up and deposited. To lessen damages from expected continued high releases, the Service plans to expedite development of alternative stabilization measures.

The Work Group also approved plans for dredging and developing marsh backwaters in the Imperial National Wildlife Refuge, planned as part of the Bicentennial Land Heritage Projects and utilizing funds from that source.

Legal Issues

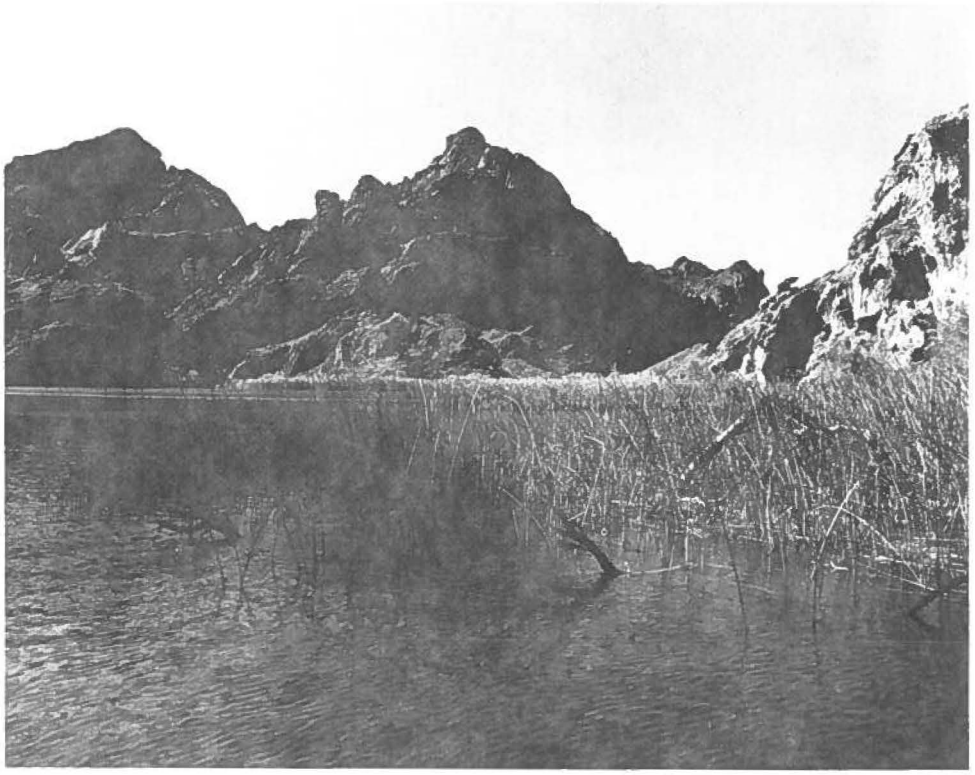
Arizona v. California

The Board's 1978 Annual Report described the final settlement of the almost 15-year-old issue of present perfected rights, culminating in a January 9, 1979 supplemental decree of the United States Supreme Court. As defined in the 1964 Decree, present perfected rights are mainstream water rights acquired under state law and exercised by an actual diversion, or federal reserved water rights, both established prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

In addition to entering the supplemental decree, the Court also referred to a Special Master the December 21, 1978 motion of the United States and several motions of the five lower Colorado River Indian tribes made during 1977 and 1978 for modification of the decree to permit diversion of additional Colorado River water to the five reservations. These motions are described in the Board's 1977 and 1978 Annual Reports. As stated in the government's motion, the claims are for water for two categories of lands: (1) "additional practicably irrigable lands" as a result of "boundary adjustments, effected since the entry of the Decree of March 9, 1964," amounting to 65,806 acre-feet of additional diversions, and (2) "practicably irrigable lands which were erroneously omitted from consideration" and which were within the recognized boundaries of the reservations at the time of the decree, amounting to 20,306 acre-feet of additional diversions. The additional consumptive use resulting from these diversions is estimated to be between 43,000 and 59,000 acre-feet.

In February 1979, the "state parties", comprising the States of Arizona, California, and Nevada, and the seven California public agencies (Palo Verde Irrigation District, Coachella Valley Water District, Imperial Irrigation District, The Metropolitan Water District of Southern California, City of Los Angeles, City of San Diego, and County of San Diego) filed one

Havasu Lake National Wildlife Refuge, Topock Gorge.



consolidated response to the December 1978 motion of the United States. The state parties responded that the issue of the number of irrigable acres within the 1964 boundaries of the reservations was fully litigated before the previous Special Master and finally determined by the Supreme Court in 1964, and is not subject to relitigation. The state parties also contended that determinations recognizing enlarged reservation boundaries are not final and are subject to judicial review. They contended that the Court, through the Special Master, should consider the boundary land claims through a two-step process: (1) determination of the underlying boundary disputes to see if any reservation has larger boundaries than were recognized in 1964; and (2) if such is the case, establishment of water rights based on practicably irrigable acreage within those enlarged boundaries.

The Colorado River Indian Tribes and the Cocopah Indian Tribe adopted and approved the December 1978 motion of the United States, except that the Colorado River Indian Tribes reserved the right to seek additional water rights for an additional 37,449 acres of omitted lands.

In March 1979, Special Master Elbert P. Tuttle called an informal conference in Phoenix, Arizona, to identify issues in the case and in April 1979 held a formal hearing in San Francisco on the following points: (1) whether the boundaries of the respective Indian reservations have been "finally determined" within the meaning of Article II (D)(5) of the 1964 Decree, (2) whether the Eleventh Amendment to the U.S. Constitution bars intervention in this suit by the Indian tribes without the consent of the state parties, and (3) whether there is any procedure for the Indian tribes to participate as if they were parties, pending a ruling on their motions to intervene.

In August 1979, Judge Tuttle issued a "Memorandum and Report on Preliminary Issues" and filed it with the Court. The report granted the Indian tribes unconditional leave to intervene in the suit and concluded that the Eleventh Amendment did not bar intervention. The report also concluded that, for the purposes of determination of reservation water rights in this litigation, boundary determinations made by the district courts and by the Secretary of the Interior are final. For the "omitted lands", no decision was made whether or on what basis the 1964 and 1979 decrees may be modified to establish additional present perfected rights for Indian reservations. The ruling was that this proceeding will include proof of the irrigability of both boundary and omitted lands, and a decision on additional water for the omitted lands will be deferred until after the tribes, the defendants, and the United States have completed the submission of evidence.

Construction continues on the intake to the Central Arizona Project which will begin to receive its allotment in the mid-1980s.

The state parties took exception to the Special Master's memorandum report and in November 1979 filed a motion with the Court urging rejection of his rulings on the following items: (1) the hearing of evidence on "omitted lands" claims without first deciding whether such claims can even be asserted, (2) the establishment of disputed boundaries, (3) the principle of sovereign immunity, and (4) the right of intervention by the Indian tribes. The state parties stated that their rights would be irrevocably harmed if proceedings continued before the Special Master without the above issues being resolved by the Court itself. On January 7, 1980, the Court denied the state parties' motion, in

effect deferring its consideration of the Special Master's preliminary rulings until the entire trial before the Special Master is completed.

Lower Colorado River Return Flow Study

The activities of the Federal-State Task Force on Ground Water Return Flows to the Lower Colorado River have been described in the Board's previous annual reports. The Task Force met twice during 1979 to discuss progress on the study.

By the use of piezometer networks and digital computer models in the Yuma area, the U.S. Geological Survey has estimated that there are about 79,000 acre-feet per year of underflow returning to the mainstream, with about 46,000 acre-feet coming from the Arizona side and 33,000 acre-feet coming from the California side. However, since the state line does not follow the Colorado River in much of this area, it will be a complex problem to determine return flows for individual diverters within the states. In addition, flood flows and the present high releases to Mexico have caused additions to ground water storage that will require several years to stabilize after the excess flows are stopped. The Geological Survey is developing additional analytical methods to handle this problem.

For the Parker, Palo Verde, and Cibola Valleys, the Geological Survey plans to develop a simplified analytical method utilizing a mathematical model of the entire area in order to save time, compared to the individual cross sections that were developed in the Yuma area.

The issue of the State of California being charged for additional diversions from the Colorado River as

High above the Grand Canyon, it is difficult to realize that the Colorado, in fact, is one of the nation's most managed of rivers.

a result of the City of Blythe and the East Blythe County Water District being reported separately from Palo Verde Irrigation District in the Department of the Interior's annual report on diversions and returns pursuant to Article V(b) of the 1964 *Arizona* v. *California* Decree was raised. The Water and Power Resources Service representatives agreed to look into this issue. Another issue raised was the rights for the water supply being served to the Fort Mojave Indian Reservation Tribal Village by the City of Needles.

Water Supply for Noncontract Users Along the Lower Colorado River

The Board's 1978 Annual Report, in discussing the Yuma Desalting Plant Reject Stream Replacement Study, mentioned a study by the Water and Power Resources Service of pumping ground water from wells to be constructed along the All-American Canal near its intersection with the Coachella Canal. In 1979, the Service held meetings with representatives of the Imperial Irrigation District and other California water contractors to discuss their findings from this study and the possibilities of exchanging pumped ground water for Colorado River mainstream water to serve Bureau of Land Management recreational lands and other noncontract water users along the lower Colorado River. The water agencies expressed willingness to agree to such an exchange subject to certain conditions.

The Service believes that the studies have progressed to the point where a feasibility investigation should be commenced. A three-year investigation would cost about $250,000 and could be completed by 1983, which would give sufficient time for construction of the necessary water supply facilities by 1985 when the Central Arizona Project is expected to be completed and California's diversions are expected to be reduced. The Colorado River Board adopted a resolution supporting a feasibility investigation by the Service to be completed no later than December 1983.

Glen Canyon Filling Criteria

The Upper Basin states continued their efforts to terminate the 1962 Glen Canyon Filling Criteria, which, if successful, would end the payments from the Upper Colorado River Basin Fund to the Hoover Allottees to meet deficiencies in Hoover energy generation caused by the filling of the Upper Basin reservoirs. On March 23, 1979, the Upper Colorado River Commission passed a resolution calling for the Secretary of the Interior to announce that the criteria shall no longer be applicable one year from the date that the combined active storage in Lake Powell and Lake Mead totals 41,000,000 acre-feet. The Secretary sent letters to the governors of the seven Colorado River Basin states and Hoover Dam Power Allottees announcing a meeting on June 14, 1979, in Las Vegas to discuss possible termination of the criteria.

The Board's Chief Engineer gave a statement at the June 14 meeting in opposition to termination, which statement was supported by Arizona, Nevada, and the Hoover Allottees, while a spokesman for the Upper Basin states gave a statement favoring termination.

In October, the Regional Director of the Water and Power Resources Service's Upper Colorado Regional Office announced by letter his intention to adopt a year 1980 annual operation "power optimization" plan for the Colorado River Storage Project and planned to recommend that the Secretary of the Interior terminate the Glen Canyon Filling Criteria if, through a "paper accounting", Lake Powell would have filled to elevation 3,700 feet during 1980, utilizing a theoretical "storage conservation" plan. The Chief Engineer coordinated with California power entities in responding to this proposal. The letter stated strong objections to termination of the Glen Canyon Filling Criteria based on fictitious Lake Powell levels arrived at through a "paper accounting" method, and pointed out that the proposal furthers the interests of the Upper Basin states over those of the Lower Basin states. Also, it again raised a potentially divisive issue that has been raised and settled several times in the past decade.

As of the end of 1979, the Regional Director had not transmitted any recommendation to the Secretary of the Interior concerning the Glen Canyon Filling Criteria.

Colorado River Reservoir Operating Criteria

In March 1979, the Water and Power Resources Service notified the seven Colorado River Basin states by letter that the Service will discontinue investigations, begun in 1978, into the basis and procedures for determining the amount of storage in Upper Basin reservoirs required pursuant to the Operating Criteria for Colorado River reservoirs under Section 602(a) of the 1968 Colorado River Basin Project Act (called "602(a) storage"). State representatives had questioned the need for any studies at this time. However, the letter also brought up a new issue, the annual determination of Section 602(a) storage as required by the Operating Criteria. The letter stated that the basis for that determination shall be the following four factors: (1) Upper Basin depletion estimate, (2) Lee Ferry delivery of 8,250,000 acre-feet annually, (3) water supply during the most critical period of record, and (4) reservoir drawdown limited to minimum power head. Since these factors were not in conformity with the criteria established in 1970, the Chief Engineer worked with representatives from Arizona and

Nevada in preparation of a joint letter objecting to the stated basis for determination of 602(a) storage. The joint three-state letter dated May 7, 1979, requested the Service to send another letter to the Basin states stating that all of the factors listed in the 1970 Operating Criteria for determination of 602(a) storage would be used, not just the four factors listed in the Service's letter. The three-state letter stated that the Operating Criteria were adopted after an intensive analysis of all relevant factors in accordance with Public Law 90-537, which states that the Secretary of the Interior may modify the criteria to better achieve the purposes specified, but only after appropriate consultation with the Basin states. Since there had been no consultation with the states with regard to using only the four listed factors, the letter strongly objected to use of only these factors for determination of 602(a) storage.

By letter dated July 18, 1979, Assistant Commissioner Clifford Barrett stated that the Service was not intending to modify or interpret the basis for determining 602(a) storage and that the listing of the four specific factors did not mean that other relevant factors would be excluded.

Reevaluation of the Hoover Dam Flood Control Regulations

The Corps of Engineers and the Water and Power Resources Service have been jointly evaluating possible revisions to the Hoover Dam Flood Control Regulations over the past few years. This study has analyzed alternative combinations of storage spaces reserved in Lake Mead and upstream reservoirs for flood control purposes and various release rates to draw down Lake Mead to required storage levels by January 1 of each year. Public meetings were held at various communities along the lower Colorado River during 1979 to receive comments on the present regulations and on the alternatives.

A draft report on the study was received by the Board in late 1979. The present operational plan is to release a "target maximum" flood control release of 40,000 cubic feet per second (cfs), which is the release which is not exceeded unless absolutely necessary. However, the report states that encroachment of developments on the flood plain has taken place within the last two decades to the point where large flood damages would now result from a target maximum release. In fact, substantial damages could occur in the Parker Strip area for a sustained release of over 28,000 cfs. The most extreme condition mentioned in the report is the largest flood of record, a 300,000 cfs inflow to Black Canyon in 1884, and that flood could be regulated sufficiently in Lake Mead to a peak outflow of 73,000 cfs.

The report states that there is a 96 percent chance that some flood control releases will have to be made within the next 10 years. When the reservoir system is filled, there is a 24 percent chance in any year for sustained releases averaging 28,000 cfs or more for one month from Hoover Dam under the present operational plan. Storage in Lake Havasu would be sufficient to ensure that only half of these floods would cause sustained releases in excess of 28,000 cfs below Parker Dam. Flood damages would occur at Needles when releases exceed 30,000 cfs and at Blythe when releases exceed 38,000 cfs.

Of nine alternative operational plans selected, the alternative which is very similar to the current plan of operation was tentatively selected as the recommended plan.

Hoover Dam Power Contracts

In November, the Western Area Power Administration sponsored meetings on its proposed marketing plan for Boulder Canyon Project (Hoover Dam) hydroelectric power after the current 50-year contracts expire in May 1987. The plan calls for a two-year process of developing marketing criteria, holding public meetings, negotiations, and allocating power, ending in the autumn of 1981. The Chief Engineer met with representatives of the California Hoover Power Allottees in December to prepare a coordinated response to the proposed marketing plan. The Allottees were concerned that their right to renew their present contracts, as stipulated in the enabling legislation and in the existing contracts, be acknowledged and honored.

Fish and Wildlife Coordination Act—Proposed Regulations

On May 18, 1979, the U.S. Fish and Wildlife Service published in the Federal Register a notice of proposed establishment of rules for administering the 1958 Fish and Wildlife Coordination Act. Because the proposed rules would have gone beyond the directives for coordination contained in the original act in requiring actions that could have harmed the Colorado River rights and interests of the State and its agencies, the Chief Engineer drafted comments which were discussed at the Board's June 20, 1979 meeting. By letter of July 13, 1979, to the Associate Director, Fish and Wildlife Service, the Chief Engineer commented that the proposed rules should adhere closely to the specific language of the 1958 Act and that any significant expansion should only occur through action by Congress. Several sections of the proposed rules were identified where it appears that the rules would go beyond the directives for coordination contained in the Act. Other agencies in the western states submitted similar comments.

The Fish and Wildlife Service published a notice in the November 6, 1979 Federal Register advising the public that the proposed rules are being redrafted in response to public and other agency comments and also that an Environmental Impact

Statement on the proposed rules is being prepared, which statement will include various alternative methods of complying with the 1958 Act.

Environmental Defense Fund v. Costle, et al.

The Environmental Defense Fund (EDF) suit on Colorado River salinity standards, described in the Board's 1977 and 1978 Annual Reports, continued during the year. On April 30, 1979, the EDF filed its motion for summary judgment in the litigation. The defendants responded on July 6, 1979, with a separate motion for summary judgment, accompanied by a statement of material facts and affidavits by the Chief Engineer of the Board, Carl Slingerland of New Mexico, and Don DuBois and Gene Reetz of the Environmental Protection Agency. Oral arguments on the motions for summary judgment were held on August 10 in Washington.

U.S. District Court Judge Thomas Flannery entered a judgment on the litigation on October 3, 1979, which granted the federal-state defendants' motion for summary judgment on all six claims in the litigation, and, at the same time, denied the EDF motion. In an accompanying 17-page opinion, the judge found that the defendants had shown that there was a reasonable basis, as demonstrated in the administrative record, for the Environmental Protection Agency's action in approving the State-adopted standards. The judge also found it unnecessary to consider the effects of the Colorado River Compacts on the plaintiff's claims.

This favorable decision enables the seven Basin states and the federal agencies to proceed with their cooperative efforts to meet the numeric salinity criteria for the Colorado River while the Basin states continue to develop their Compact-apportioned waters.

On December 3, 1979, the EDF filed a notice of appeal with the District of Columbia Court of Appeals.

Legislation

Proposed Federal Legislation on Western Area Power Administration

A bill, S. 734, entitled "Federal Power Marketing Revolving Fund Act of 1979", was introduced into the U.S. Senate on March 22, 1979, at the request of the Administration. This bill would establish revolving funds for four federal power marketing agencies, using revenues from power marketing from federal power facilities, and would greatly expand the ability of the agencies to acquire transmission facilities. Because of concerns that the authorities granted by this bill could enable the federal power agencies to unilaterally set rates for Hoover and Parker-Davis power after expiration of existing contracts, and to acquire all or portions of transmission facilities owned by California agencies, the Board sought amendments to the bill.

Meetings were held with representatives of Arizona, California, and Nevada power entities, and amendments to S. 734 were drafted that would be acceptable to the entities and would provide the protection deemed to be necessary. On June 28, 1979, the Chief Engineer presented a statement containing the amendments in Washington, D.C., before the Subcommittee on Energy Conservation and Supply of the Senate Committee on Energy and Natural Resources. The statement represented the views of the Colorado River Board, The Metropolitan Water District of Southern California, the Los Angeles Department of Water and Power, the State of Arizona, and the Central Arizona Water Conservation District.

No further action on this proposed legislation occurred during 1979.

Energy Mobilization Board

During 1979, Congress developed legislation to create a new federal agency, an "energy mobilization board," as a part of the President's energy program. Such a board would have the power to expedite the construction and operation of projects that would develop the nation's energy resources. Under S. 1308, passed by the Senate, and one version of H.R. 4985, approved by the House Interstate and Foreign Commerce Committee, this board would have the power to overrule laws and rules and regulations that would otherwise hinder these projects. Another version of H.R. 4985, approved by the House Interior and Insular Affairs Committee, did not grant those powers to the proposed board.

Because of concerns that the enabling legislation might grant powers to this board which could result in abrogation of existing water rights in the Colorado River Basin, the Chief Engineer worked with other Basin state representatives and drafted amendments to these bills that would exempt interstate water compacts, state and local water laws, and federal water contracts from the powers of the proposed energy mobilization board. The language of these amendments was revised and later added to the Commerce Committee's version of H.R. 4985. In a meeting with western states governors in October, the President endorsed this exemption pertaining to water rights.

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